

an optical device that conducts an optoelectric conversion, said optical device comprising at least a surface optical device and being disposed between said electric connecting portion and said optical transmission means; and

an optical coupling portion disposed between said optical transmission means and said optical device, said optical coupling portion being built in said optical device, wherein said electric connecting portion is detachable.

29. (New) An optical connecting device according to claim 28, wherein said optical device includes a light emitting device and a light receiving device, which light receiving device is a p-i-n photodiode or a metal-semiconductor-metal (MSM) photodiode.

30. (New) An optical connecting device according to claim 28, wherein said optical device has a plurality of surface optical devices with independent electrodes mounted in a flip-chip manner.

31. (New) An optical connecting device according to claim 28, wherein an integrated electronic circuit device that drives said optical device is disposed in said optical connecting device.

32. (New) An optical connecting device according to claim 28, wherein said optical device is a surface emitting device having multi-layer reflective mirrors.

33. (New) An optical connecting device according to claim 28, wherein said optical transmission means includes a metal wiring.

34. (New) An optical connecting device according to claim 33, wherein the metal wiring is formed as a wiring pattern.

35. (New) An optical connecting device according to claim 28, wherein said optical device is driven by a CMOS buffer of an external apparatus connected to said electric connecting portion.

a 36. (New) An optical connecting device according to claim 28, wherein said electric connecting portion includes a recessed electric coupler.

37. (New) An optical connecting device according to claim 28, wherein a plate having a window is disposed between said optical device and said optical transmission means and the window has a lens.

38. (New) An optical connecting device according to claim 28, wherein said optical device is prepared by a process comprising the steps of forming an active layer on a substrate and removing said substrate.

39. (New) An optical connecting device according to claim 28, wherein said optical transmission means comprises a single mode fiber.

40. (New) An optical connecting device according to claim 28, wherein said optical transmissions means is fixed in said optical connecting device by V-shaped grooves on a silicon substrate.

41. (New) An optical connecting device according to claim 28, wherein said optical transmission means comprises a waveguide sheet in which waveguide cores are arranged in an array.

42. (New) An optical connecting device comprising:

an electric connecting portion;

optical transmissions means for transmitting an optical signal;

an optoelectric converting portion, said optoelectric converting portion including a plurality of surface emitting devices and a plurality of surface receiving devices and being disposed between said electric connecting portion and said optical transmission means; and

an optical coupling portion disposed between said optical transmission means and said optical device, said optical coupling portion being built in an optical connecting device,

wherein said electric connecting portion is detachable.

43. (New) An optical connecting device comprising:

an electric connecting portion;

optical transmission means for transmitting an optical signal;

an optoelectric converting portion, said optoelectric converting portion including a plurality of surface optical devices arranged in a two-dimensional array and being disposed between said electric connecting portion and the optical transmission means; and

an optical coupling portion disposed between said optical transmission means and said surface optical devices, said optical coupling portion built in an optical connecting device,

wherein said electric connecting portion is detachable.

44. (New) An optical connecting device comprising:

an electric connecting portion;

optical transmission means for transmitting an optical signal;

an optoelectric converting portion, said optoelectric converting portion including at least a surface optical device and through-hole and being disposed between said electric connecting portion and said optical transmission means; and

an optical coupling portion disposed between said optical transmission means and said surface optical device, said optical coupling portion built in an optical connecting device,

wherein said electric connecting portion is detachable.

45. (New) An electronic device comprising an optical connecting device according to claim 28 to connect at least first and second boards.

46. (New) An electronic device comprising an optical connecting device according to claim 42 to connect at least first and second boards.

47. (New) An electronic device comprising an optical connecting device according to claim 43 to connect at least first and second boards.

48. (New) An electronic device comprising an optical connecting device according to claim 44 to connect at least first and second boards.

AI 49. (New) An electronic device comprising a display, a computer, and a connecting means for connecting said display and said computer, wherein said connecting means comprises an optical connecting device according to claim 28.

50. (New) An electronic device comprising a display, a computer, and a connecting means for connecting said display and said computer, wherein said connecting means comprises an optical connecting device according to claim 42.

51. (New) An electronic device comprising a display, a computer, and a connecting means for connecting said display and said computer, wherein said connecting means comprises an optical connecting device according to claim 43.